

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A device for sheet material corrugation comprising:  
a removable vacuum chamber including the a transformable mandrel containing the  
including a plurality of plane elements pivotally pivotally connected in-between with the use  
of gas-proof fabric, with each other, a sheet of gas-proof material, and a sealing cord;

the means for performing a preliminary mandrel transformation including the  
removable vacuum chamber with the sealing roller and the vacuumization system, and;

the means for performing a final mandrel transformation including the a first traverse  
with the a first drive providing it's a plane-parallel travel for the first traverse, is  
characterized by that it includes the

a mechanism for putting the transformable mandrel into the an initial plane state, said  
mechanism including a lower slab and an upper slab containing two parallel to each other and  
slabs located one over another on both sides either side of the transformable mandrel and the  
a drive providing their reciprocal travel,

wherein said means for performing said preliminary mandrel transformation include  
two systems of pusher rows installed correspondingly on the lower and upper slabs,

wherein said first traverse and said first drive are installed on the lower slab.

Claim 2 (Canceled)

Claim 3 (Currently Amended): A device according to claim 1, wherein 2 is  
characterized by that it includes the pushers of said two systems of pusher rows have with the  
individual drives providing their seesaw travel of said pushers, wherein whereof the  
perforations in the lower and upper slabs provide the consecutive interaction of the pushers

with the transformable mandrel on its ~~either side~~ two sides at locations of ~~mandrel plane~~  
elements pivot connections at ~~the intersection~~ intersections of saw-tooth and zigzag bending  
lines of the transformation mandrel.

Claim 4 (Currently Amended): A device according to claim 1, wherein 2 is  
~~characterized by that the~~ rows of ~~the lower~~ pushers on the lower slab are placed so ~~that they~~  
~~can~~ as to come into contact with the transformable mandrel during said preliminary mandrel  
transformation along ~~the~~ protrusions zigzag lines, while ~~the~~ rows of ~~the upper~~ pushers on the  
upper slab are placed so as to come into contact during said preliminary mandrel  
transformation with the transformable mandrel ~~[[ - ]]~~ along ~~the~~ recesses zigzag lines.

Claim 5 (Currently Amended): A device according to claim 1, wherein is  
~~characterized by that it includes~~ the means for performing said final mandrel transformation  
~~containing the~~ include a second traverse located such that said first and second traverses are  
located on opposite sides of ~~on~~ the lower slab ~~on the other side of the mandrel~~ parallel to each  
other ~~the first one and the~~ , said means for performing said final mandrel transformation  
further comprising a second drive providing it's a plane-parallel travel for the second  
traverse.

Claim 6 (Currently Amended): A device according to claim 3, wherein the pushers  
are configured to interact with the transformation mandrel at locations of a pivoted  
connection of the plane elements of the transformation mandrel at intersections of bending  
lines of the transformation mandrel upon completion of said preliminary transformation,  
wherein a ~~is characterized by that the~~ distance  $L$  between adjacent intersections of projections

of bending lines of the transformation mandrel ~~the pushers rows in the~~ a direction of saw-tooth bending lines ~~of the mandrel~~ is equal to

$$L = \sqrt{L_r^2 - h^2} ,$$

where  $L_r$  is ~~the step of~~ a distance between adjacent zigzag lines of bending on said transformation mandrel prior to said preliminary transformation in a direction of saw-tooth bending lines on the corrugated article development;

$h$  is ~~the~~ a corrugated article relief height after the preliminary transformation.

Claim 7 (Currently Amended): A device according to claim 6, wherein 5 is ~~characterized by that~~ the corrugated article relief height  $h$  after the preliminary transformation is ~~taken~~ minimal so ~~that~~ as to provide further ~~reciprocal~~ joint transformation of the ~~shaping transformation~~ mandrel ~~with the blank by means of force application from the side of~~ traverses.

Claim 8 (New): A device according to claim 1, wherein said removable vacuum chamber includes two gas-proof sheets connected to each other by said sealing cord along edges of said two gas-proof sheets so as to provide a seal between said two gas-proof sheets, and wherein said transformable mandrel is enclosed between said two gas-proof sheets.

Claim 9 (New): A device according to claim 1, wherein said removable vacuum chamber is configured to receive an article to be corrugated and maintain a vacuum with said article inside said removable vacuum chamber during said preliminary and final mandrel transformations.